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U.S. Food Market Estimator: Instructions for Use

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Abstract

The U.S. Food Market Estimator is designed to help users determine the potential demand, by county in the United States, for more than 200 different food items. This is an expansive tool, using data collected each year by the U.S. Department of Agriculture's Economic Research Service (ERS)

Disciplines

Agricultural and Resource Economics | Agricultural Economics



U.S. Food Market Estimator

www.ctre.iastate.edu/marketsize

Instructions for use



What is the U.S. Food Market Estimator?

The U.S. Food Market Estimator is designed to help users determine the potential demand, by county in the United States, for more than 200 different food items. This is an expansive tool, using data collected each year by the U.S. Department of Agriculture's Economic Research Service (ERS).

The tool provides information for 204 food products, including various dairy and meat products, fruit, vegetables and grains. Users select how they want results to be shown: by number of servings, pounds produced, truckloads transported, even cubic feet of warehouse space needed to store a particular product. Products can be shown individually, or as groups of products at key stages of the food supply chain. Results can be adjusted to reflect a particular market share, or the unit of measure changed from pounds to other units in order to suit a variety of needs such as number of servings, truckloads per day or cubic feet of warehousing needed each week.

How does this tool work?

The U.S. Food Market Estimator uses the USDA-ERS Food Availability Data System, an annual estimate of the amounts of 204 food items available at a per capita rate for human consumption in the United States. This tool multiplies the national per capita rate by the county 2007 Population Estimate (from the U.S. Census) to determine the potential market for each food product at the county level.

For each of the 204 food products in the Food Availability Data System, the ERS provides pertinent information for farm production (such as farm weight, carcass weight, dairy weight, etc.), as well as amounts received by retailers and sold by retailers. The system accounts for amounts lost to spoilage, trimming, and other factors at key points in the supply chain.

Does this tool show actual consumption?

No. The USDA-ERS Food Availability Data System, on which this tool is built, is not based on direct observations of consumption. The information is calculated by adding total annual production, imports and

beginning stocks of a particular commodity, and then subtracting exports, ending stocks, and non-food uses. Per capita estimates are then calculated using population estimates for a particular year.

However, the ERS per capita food availability data are useful for economic analysis because they serve as indirect measures of trends in food use. Economists rely on this data to estimate effects of changes in price, income, and information on food consumption. Market researchers use the data to study changes in consumption and market shares for food commodities.

More information and documentation about the Food Availability Data System:

- <http://www.ers.usda.gov/Data/FoodConsumption/FoodAvailFaqs.htm>
- <http://www.ers.usda.gov/Data/FoodConsumption/FoodAvailDoc.htm>

What are the limitations of this tool?

The U.S. Food Market Estimator is intended for comparative and strategic uses. Information is based on national averages; it does not account for seasonal or geographic dynamics of specific product markets. Results should be used to gauge approximate market size for general applications.

What food products are included?

The U.S. Food Market Estimator uses 204 food products that are part of the USDA-ERS Food Availability Data System. These foods are grouped according to categories roughly following USDA's Food Pyramid:

- **Dairy:** All fluid milk products and many foods made from milk such as cheese and yogurt. This does not include products with little or no calcium such as cream cheese, cream and butter (look under Fats & Sugars/Dairy case).
- **Fats & Sugars:** Vegetable oils, cane and processed sugars, also butter and margarine (select Dairy Case sub-group), and honey (select Syrups sub-group)
- **Fruits:** All products, whether they are canned, dried, fresh, frozen or sold as juice
- **Grains:** All products made from wheat, rice, oats,

cornmeal, barley or another cereal grain, which would include bread, pasta, oatmeal, breakfast cereals, tortillas, grits and other baked goods (results for these products are not listed separately).

- **Meats & Nuts:** Fish, nuts, poultry, red meat and eggs (select Dairy Case sub-group)

- **Vegetables:** All products, whether they are canned, dried, fresh or frozen

Fields left blank will include results for all items in that group or product.

How are units of measure determined?

The USDA-ERS Food Availability Data System provides per capita rates for each product in each stage of the supply chain. All per capita rates are in pounds per year, from which all other measures are calculated. Servings are based on weight (in grams) for each serving, also included in the per capita data. Pounds are converted to cubic feet using a weight density factor specific to each food product (see the USDA National Nutrient Database for Standard Reference and USDA's Weights, Measures, and Conversion Factors for Agricultural Commodities). Truck load estimates were calculated by weight instead of volume, because the weight density of all products exceeded 11.4 pounds/cubic foot. Semi-truck loads were set to 20 tons to illustrate 80 percent average capacity (by weight).

Here's an example of how the tool works

How much pork is needed each year for the retail market in Polk County, Iowa?

1. Select Food Products

- o Select "Meats & Nuts" from the Food Group menu.
- o Select "Red Meat" from the Sub-Group menu.
- o Select "Pork" from the Product menu.
- o Some products have even more choices in the Sub-Product menu but Pork does not; select "All."

2. Select Market Factors

- o Leave Units as "Pounds" (default)
- o Leave Market Target as "Production Needed" (default)
- o Leave Timeframe as "Annually" (default)
- o Select "Iowa" from State menu.

3. Choose Market Share.

- o Leave Percentage as "100" (default).
- o Click on "Calculate;" results shown on web page.

If you want to know how much pork is not lost along the supply chain to spoilage and trimming, go back to Market Target and select "Received by Retailers" and click the "Calculate" button again.

The results show that 19,226,313 pounds of pork are received by retail markets for Polk County, Iowa each year, or 45.96 pounds per person.

Who might use this tool?

- **Farmers and other local direct-market food producers:** Useful for identifying approximate market size in nearby counties in making decisions about marketing, capacity and potential expansion

- **Governmental agencies (transportation, municipal and regional planning, public works):** Useful in determining approximate food market size and impact of food production/processing on roads and other infrastructure.

- **Food policy councils, nonprofit organizations, university researchers, economic development groups:** Useful for analyzing approximate potential markets. Data can be used in assessing economic impacts related to changes in food availability, diet and marketing. Research scenarios might include selecting local purchasing targets for schools, retail, food service and other food markets at the county, state or national level.

Who developed the U.S. Food Market Estimator?

This tool was funded, reviewed and published by the Leopold Center for Sustainable Agriculture at Iowa State University; and was developed and is hosted by the Center for Transportation Research and Education. This tool is copyrighted and intended for educational purposes; its use or application is not intended for sale.

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Where can I get more information?

For additional questions, or how to use the U.S. Food Market Estimator, contact Craig Chase, (515) 294-1854, or cchase@iastate.edu.

The Leopold Center was established by the Iowa Legislature as part of the Iowa Groundwater Protection Act of 1987 to identify and reduce negative environmental and socio-economic impacts of agricultural practices, contribute to the development of profitable farming systems that conserve natural resources, and cooperate with Iowa State University Extension to inform the public of new findings.
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